IN THE CLAIMS:

1. (Currently amended) A fuel cell system comprising:

at least one fuel cell having a fuel chamber including a fuel electrode, an oxygen chamber including an oxygen electrode and an electrolyte layer interposed between the fuel electrode and the oxygen electrode; and

pressure regulating means for regulating a supply pressure of fuel gas ~~to be~~ supplied to the fuel chamber at a first ~~;wherein the pressure regulating means sets up the supply~~ pressure ~~of the fuel gas at a time~~ when the fuel cell starts up power generation, until concentration of the fuel gas in the fuel chamber exceeds a predetermined gas concentration, and for reducing ~~higher than~~ the supply pressure of the fuel gas to the fuel chamber to a second pressure, lower than the first pressure, when the concentration of the fuel gas in the fuel chamber exceeds the predetermined gas concentration, to thereby establish ~~during~~ a normal power generating state in which the fuel cell is generating electric power.

2. (Currently amended) The fuel cell system according to claim 1, further comprising a sensor for detecting the concentration of the fuel gas in the fuel chamber and wherein the pressure regulating means includes a ~~regulatable~~ pressure regulating valve and control means for controlling the ~~regulatable~~ pressure regulating valve responsive to the detected concentration of the fuel gas in the fuel chamber.

3. (Currently amended) The fuel cell system according to claim 1, further comprising a

fuel gas supply line through which the fuel gas flows at the time of startup of power generation, ~~startup time~~ wherein the pressure regulating means includes two regulating valves that are arranged in parallel and are respectively set to provide different supply pressures, a switching valve arranged on the line, and switching means for switching the open and close of the switching valve.

4. (Currently amended) The fuel cell system according to claim 1, wherein, in the normal power generation state of the fuel cell, ~~includes a state when~~ the fuel cell is connected to an external load.

5. (Original) The fuel cell system according to claim 1, further comprising a start switch for turning on and off of the fuel cell system wherein the power generation start-up time of the fuel cell includes a predetermined period of time after the start switch is turned on.

6. (Currently amended) The fuel cell system according to claim 5, wherein the power generation start-up time of the fuel cell is when ~~includes the case where~~ the start switch is turned on after a lapse of a predetermined period of time after the start switch has been turned off in the normal power generation state.

7. (Withdrawn) A fuel cell system comprising:

at least one fuel cell having a fuel chamber including a fuel electrode, an oxygen chamber including an oxygen electrode and an electrolyte layer interposed between the

fuel electrode and the oxygen electrode;

a fuel gas concentration sensor for detecting the concentration of a fuel gas discharged from the fuel chamber; and

pressure regulating means for regulating a supply pressure of fuel gas ~~to be~~ supplied to the fuel chamber at a first ~~wherein the pressure regulating means sets up the supply~~ pressure ~~of the fuel gas at a time~~ when the fuel cell starts up power generation, until the detected concentration of the fuel gas in the fuel chamber exceeds a predetermined fuel gas concentration, and for reducing ~~higher than~~ the supply pressure of the fuel gas to the fuel chamber to a second pressure, lower than the first pressure, when the detected concentration of the fuel gas in the fuel chamber exceeds the predetermined fuel gas concentration, to thereby establish ~~during~~ a normal power generating state in which the fuel cell is generating electric power.

8. (Canceled)

9. (Currently amended) The fuel cell system according to claim 7~~8~~, wherein the predetermined fuel gas concentration is 95 volume percent.

10. (Currently amended) The fuel cell system according to claim 7, further comprising an oxygen concentration sensor for detecting the concentration of an oxygen gas discharged from the fuel chamber wherein the pressure regulating means switches the supply pressure of the fuel gas at the start-up time to the supply pressure of the fuel gas at the normal power generation state in the case where the fuel gas

concentration detected by the fuel gas concentration sensor is higher than the ~~a~~ predetermined fuel gas concentration and the oxygen concentration detected by the oxygen concentration sensor is lower than a predetermined oxygen concentration.

11. (Original) The fuel cell system according to claim 10, wherein the predetermined fuel gas concentration is 95 volume percent and the predetermined oxygen gas concentration is 1 volume percent.

12. (Currently amended) A fuel cell system comprising:

a start switch for turning on or off of the fuel cell system;

at least one fuel cell having a fuel chamber including a fuel electrode, an air chamber including an oxygen electrode and an electrolyte layer interposed between the fuel electrode and the oxygen electrode;

a timer for measuring a period of time after the start switch has been turned off; and

pressure regulating means for regulating a supply pressure of fuel gas ~~to be~~ supplied to the fuel chamber at a first ~~;wherein the pressure regulating means sets up the supply~~ pressure ~~of the fuel gas at a time~~ when the fuel cell starts up power generation, until the time measured by the timer reaches a predetermined period of time, and for reducing ~~higher than~~ the supply pressure of the fuel gas to the fuel chamber to a second pressure, lower than the first pressure, when the time measured by the timer is longer than the predetermined period of time, to thereby establish ~~during~~ a normal power generation state in which the fuel cell is generating electric power ~~in the~~

~~case where the period of time measured by the timer is longer than a predetermined period of time and then thee start switch is turned on~~.

13. (New) A method for operating a fuel cell system having a fuel chamber including a fuel electrode, an oxygen chamber including an oxygen electrode and an electrolyte layer interposed between the fuel electrode and the oxygen electrode, the pmethod comprising:

regulating a supply pressure of fuel gas supplied to the fuel chamber at a first pressure when the fuel cell starts up power generation, until concentration of the fuel gas in the fuel chamber exceeds a predetermined gas concentration, and

reducing the supply pressure of the fuel gas to the fuel chamber to a second pressure when the concentration of the fuel gas in the fuel chamber exceeds the predetermined gas concentration, to thereby establish a normal power generating state in which the fuel cell is generating electric power.

14. (New) The method according to claim 13, wherein the power generation start-up time of the fuel cell is when the start switch is turned on after a lapse of a predetermined period of time after the start switch has been turned off in the normal power generation state.

15. (New) A method for operating a fuel cell system having a fuel chamber including a fuel electrode, an oxygen chamber including an oxygen electrode and an electrolyte layer interposed between the fuel electrode and the oxygen electrode, the method

comprising:

detecting the concentration of a fuel gas discharged from the fuel chamber,

regulating a supply pressure of fuel gas supplied to the fuel chamber at a first pressure when the fuel cell starts up power generation, until the detected concentration of the fuel gas exceeds a predetermined fuel gas concentration, and

reducing the supply pressure of the fuel gas to the fuel chamber to a second pressure, lower than the first pressure, when the detected concentration of the fuel gas exceeds the predetermined gas concentration, to thereby establish a normal power generating state in which the fuel cell is generating electric power.

16. (New) The method according to claim 15, wherein the predetermined fuel gas concentration is 95 percent by volume.

17. (New) The method according to claim 15, further comprising:

detecting the concentration of an oxygen gas discharged from the fuel chamber, and

reducing the supply pressure to the second pressure when the detected fuel gas concentration is higher than the predetermined fuel gas concentration and the detected oxygen concentration is lower than a predetermined oxygen concentration.

18. (New) The method according to claim 17, wherein the predetermined fuel gas concentration is 95 percent by volume and the predetermined oxygen gas concentration is 1 percent by volume.

19. (New) A method for operating a fuel cell system having a fuel chamber including a fuel electrode, an oxygen chamber including an oxygen electrode, an electrolyte layer interposed between the fuel electrode and the oxygen electrode and a start switch for starting operation of the fuel cell system, the method comprising:

measuring a period of time after the start switch has been turned off,

regulating a supply pressure of fuel gas supplied to the fuel chamber at a first pressure when the fuel cell starts up power generation, until lapse of a predetermined period of time, and

reducing the supply pressure of the fuel gas to the fuel chamber to a second pressure, lower than the first pressure, when the measured time exceeds the predetermined period of time, to thereby establish a normal power generating state in which the fuel cell is generating electric power.

20. (New) The method according to claim 13 wherein the supply pressure of the fuel gas supplied to the fuel chamber is alternated between two pressures at a predetermined time interval to produce pulsation of the flow of fuel gas to the fuel chamber prior to establishing the normal power generating state.

21. (New) The method according to claim 15 wherein the supply pressure of the fuel gas supplied to the fuel chamber is alternated between two pressures at a predetermined time interval to produce pulsation of the flow of fuel gas to the fuel chamber prior to establishing the normal power generating state.